

ADDITIONAL FEE:

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R E M A R K S

The present amendment to Claim 1 is offered to distinguish the invention of the present application from U.S. Patent No. 4,690,580, cited in the accompanying Invention Disclosure Statement. Support for the newly added claims 14 & 15 may be founded in Fig. 10 and its description in the application. Support for Claim 16 may be found in Fig. 13 and its description. Claims 17 & 18 combine the convex nesting surface of Fig. 13 and the concave nesting surface of Fig. 11, descriptions of which may also be found in the application. Claim 19 includes ring binder mechanisms wherein the rings are formed from rod on non-circular cross section.

Regarding the amended Claim 1, U.S. Patent No. 4,690,580 is limited to plane end faces 4, and 5, on the concave and convex free ends of the ring portion 2, and 3, in Figure 3. The "end faces 4,5, Y bear snugly against one another in the closed position", column 2, lines 24-25. The pin 7, of Figure 3 is "cylindrical, Y and projects

substantially perpendicularly from the end face, 5", column 2, lines 29-31. The cylindrical bore, 6, of ring portion 2 in Figure 2 is described as "sunk perpendicularly into the end face, 4", column 2, lines 28-29. In the present invention, surfaces 151 of Figs. 7, 8, 9, and 10, and their accompanying description, do not begin with a perpendicular end face, but are shaped at an angle to the surface of the ring. Thus, Claim 1, as amended herein, is patentable over U.S. Patent No. 4,690,580.

In addition to Claim 1, as amended, applicant asserts that claims 2-13 are also patentable over U.S. Patent No. 4,690,580 for the following reasons:

Claim 2 recites the different cone angles of the surfaces of the concave and convex portions of the nesting portion of the ring ends in the present invention. U.S. 4,690,580 is limited to the conical portions of the recessed end, and convex end having equal cone angles of about 45 degrees, as described in column 2, lines 41-51.

Claims 3 and 7 require the convex portion of the nesting portion of the ring end taper gradually, from the full diameter of the ring (as reflected in the cylindrical rod from which the ring is formed), not cut at right angles to the surface of the ring. U.S. Patent No. 4,690,580 is

limited to a plane end face on the convex free end of the ring, such as at 5 in Fig. 3. According to the present invention, as seen Fig. 8, and the accompanying description of conical surface, 151; there is no end face cutting the cylindrical rod of the ring portion at substantially a right angle to the surface of the ring. For many materials, a tapered the ring portion, rather than making a right angle cut, will be easier to manufacture, and stronger.

Claims 4, 5, and 6 depend from the patentable Claim 3, and Claims 8-13 depend from the patentable (amended) Claim 1.

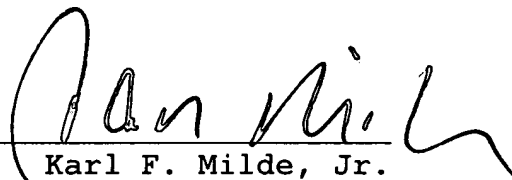
Applicant would also like to call the Examiner's attention to U.S. Patents Nos. 724,849, 778,992, and 2,460,718, also included in the accompanying IDS, which disclose very early prior art with respect to binder ring pairs with convex and concave surfaces.

CONCLUSION

In view of the amendments made and arguments presented, it is respectfully submitted that the present application is now in condition for allowance.

An early and favorable action on the merits is earnestly solicited.

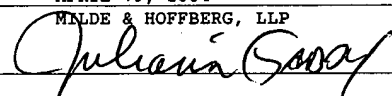
Respectfully submitted,

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